



Agreement on the Conservation
of Albatrosses and Petrels

ACAP 2026 Summary Best Practice Advice for Reducing the Impact of Pelagic and Demersal Trawl Fisheries on Seabirds

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BEST PRACTICE MEASURES

Seabird mortality in trawl fisheries occurs when birds collide with cables as they feed on fish processing waste (offal) and discards or are entangled in trawl nets as they attempt to forage on captured fish or fish parts. Cable strikes associated with the discards and fish waste discharged by vessels include collisions with net monitoring cables¹, warp cables² and paravanes. It is recognised that larger seabirds (albatrosses and giant petrels) with long wingspans are most vulnerable to cable strike mortalities; however, smaller seabirds can also suffer cable strike mortalities. Although in many fisheries vessels are required to discard prohibited fish species whole and unprocessed, vessels that catch fish for delivery for shoreside processing (catcher vessels) and that do not produce offal, are in general less associated with cable strikes. Seabird net mortalities can occur in catcher-processor (vessels that catch and process fish on board) and catcher vessels trawl operations.

Trawl fisheries are extremely diverse and encompass pelagic trawling for schooling off-bottom species and demersal trawling for fish species on the sea floor. In general, trawl fisheries range from high volume fisheries that land and process hundreds of tonnes of fish 24 hours a day continuously for weeks, to lower volume fisheries that fish for shorter time periods producing little to no waste. Because fish waste drives cable strikes, and can attract birds that may then interact with the net, management of offal discharge and discards³ is considered the primary means to reduce cable strikes and net entanglements. However, fishery and vessel characteristics dictate the extent to which offal can be managed and the method that might be employed. Where the opportunity for fish waste management is limited or impractical, cable strikes can be prevented by protecting trawl cables with mitigation devices. Birds can also be attracted to the net during hauling by fish in the net, creating risk of net entanglement. Net entanglements can be prevented by reducing the time the net is exposed on the surface of the water. The following measures have been shown to be effective at reducing seabird bycatch in trawl fisheries and are recommended as best practice measures:

¹ The net monitoring cable connects the echo-sounder or net-sounder on the headline of the trawl net to the vessel.

² The warp cables or trawl warps are the cables used to tow nets.

³ Offal discharge refers to the disposal at sea of any fish waste resulting from processing, including heads, guts and frames. Fish discards refers to any unwanted whole fish (and or benthic material)

Measures to reduce general attractiveness to seabirds

Management of offal and discards

In all cases, the discharge of offal and discards is the most important factor attracting seabirds to the stern of trawl vessels, where they are at risk of cable and net interactions. Managing offal discharge and discards while fishing gear is deployed has been shown to reduce seabird attendance of vessels and consequent risk of interactions and bycatch. The following offal and discard management measures, in order of their effectiveness in reducing bird attendance, are recommended:

1. **Retention of waste** – No discharge during fishing trips (full retention) should occur. When this is impracticable, no discharge should occur during fishing activity (when cables or net are in the water);
2. **Mealing waste** – Where retention of waste is impracticable, converting offal into fish meal, and retaining all waste material with any discharge restricted to liquid discharge / sump water;
3. **Batching waste** – Where meal production and retention of offal and discards are impracticable, waste should be stored temporarily for two hours or longer before strategically discharging it in batches;
4. **Mincing of waste** – Where retention, mealing or batching is impracticable, reduce waste to smaller particles (currently only recommended as a mitigation for bycatch of large *Diomedea* spp.).

Measures to reduce cable strikes

Where the opportunity for fish waste management is limited or impractical, cable strikes can be prevented by reducing the aerial extent of cables and deterring seabirds from interacting with them. The following measures are recommended:

Warp cables

1. **Deploy bird scaring lines** (BSLs) while fishing to deter birds away from warp cables.

Net monitoring cables

Net monitoring cables should not be used (wireless systems can be used instead).

However, it is recognised that net monitoring cables continue to be used in a number of fisheries. Where the use of net monitoring cables cannot be avoided, the following measures have been recognised to reduce the number of seabird strikes from these cables:

1. **Bird scaring lines**, specifically positioned to deter birds away from net monitoring cables while fishing; and
2. A **snatch block** at the stern of a vessel to draw the net monitoring cable close to the water and thus reduce its aerial extent.
3. **Net monitoring cable curtain**, which acts by reducing the aerial extent of the cable and creating a barrier of warm colour net material to enhance the detection of cables by birds, thereby reducing aerial and water strikes.

- 4. Net monitoring cable sock**, consisting of a tube surrounding the cable which should be in contact with the surface of the sea and be of a colour and diameter sufficient to make it visible to birds. Note this method has only been shown effective in continuous krill trawl fisheries where the aerial extent of the cable is shorter than in traditional trawl.

Measures to reduce net entanglement

Recognising that even with management of offal and discards there may be risk of net entanglement, the following further measures are recommended:

- 1. Clean nets** after every haul to remove entangled fish (“stickers”) and benthic material to discourage bird attendance during gear shooting;
- 2. Minimise the time the net is on the water surface.** Maintenance of winches and good deck practices minimises shooting and hauling times. During turns the net should be maintained at depth (e.g. 50-100 m) or, if required, bring the net to the surface with doors up (wing ends and net mouth closed); and
- 3. For pelagic trawl gear, apply net binding** to large meshes in the wings (120–800 mm), together with a minimum of 400 kg weight incorporated into the net belly prior to setting.

Further measures include avoiding peak areas and periods of seabird foraging activity. It is important to note that there is no single solution to reduce or avoid incidental mortality of seabirds in trawl fisheries, and that the most effective approach is to use the measures listed above in combination. Net entanglements during the haul remain the most difficult interactions to prevent. The ACAP review of seabird bycatch mitigation measures for pelagic and demersal trawl fisheries is presented in the following section.

[ACAP’s Review of Seabird Bycatch Mitigation Measures for Pelagic and Demersal Trawl Fisheries](#) provides further information on all of these methods, as well as other considerations.

MITIGATION MEASURES THAT ARE NOT RECOMMENDED

ACAP considers that the following measures lack scientific substantiation as technologies or procedures for reducing the impact of pelagic and demersal trawl fisheries on seabirds.

Warp scarers: Insufficient evidence to recommend as an effective measure at this time.

Bird bafflers: Insufficient evidence to recommend as an effective measure at this time.

Cones on warp cables: Insufficient evidence to recommend as an effective measure at this time.

Warp boom: Insufficient evidence to recommend as an effective measure at this time.

Warp deflector: Insufficient evidence to recommend as an effective measure at this time.

Minimise pooling area: Insufficient evidence to recommend as an effective measure at this time.

Reduced mesh size: Insufficient evidence to recommend as an effective measure at this time.

Net jackets: Unproven and not recommended as a mitigation method at this time.

Acoustic deterrents: Unproven and not recommended as a primary mitigation method at this time.

Net restrictor: Unproven and not recommended as a primary mitigation method at this time.

Lasers: High energy lasers are strongly discouraged due to ongoing concerns regarding safety to both humans and birds.